

REMARKS:

Claims 1-24 and 55-66 are pending; and no claims stand allowed.

Claims 1-24 and 55-66 were rejected under 35 U.S.C. 103(a) as being unpatentable over Linder et al. ("Ternary Ta-Si-N Films for Sensors and Actuators" Sensors And Actuators, Vol. A61 (1997), pp. 387-391) in view of Oyama et al. (US 5,444,173).

Claims 1, 24, 55, and 66 each have been amended to include the limitation of a movable portion which was recited in the preambles of the above claims.

In the Office Action, the Examiner took the position that the use of early transition metals in MEMS as disclosed in Linder made obvious the use of late transition metals, due to the equivalency of early and late transition metals. The Examiner relied on Oyama for supporting the position that early and late transition metals are equivalent. It is hoped that the Examiner will reconsider this position in view of the following.

First, the Oyama reference did not state that early and late transition metals were equivalent. Oyama simply used some early and late transition metals for the same purpose in that reference. But making the leap from the use of some early and late transition metals in Oyama, to making a prima facie case of obviousness that early and late transition metals are interchangeable in other areas, is not valid. In fact, it is submitted that it is not even valid for the field of Oyama.

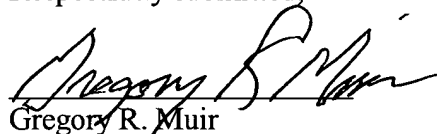
A Declaration under 35 U.S.C. §1.132 is submitted herewith to support the above statements that early and late transition metals are not interchangeable whether in all fields, or for the claimed invention. It is hoped that the Examiner will consider the statements above and in the declaration, and reconsider the continued rejection of the claims. This declaration is also being filed in co-pending applications serial number 10/176,478 filed on June 21, 2002 and 10/198,389 to filed July 17, 2002 both to Reid, where the same issue relating the early and late transition metals is also present.

As can be seen from the above, there are real differences between the early and late transition metals. Oyama does not teach that early and late transition metals are equivalent for all uses - only that in the chemistry used therein, some early and late transition metals were usable for that purpose. Much less, does Oyama teach or suggest that early and late transition metals are equivalent for flexible elements in micro-electromechanical systems. Micro-electromechanical systems (MEMS) are often defined as the integration of mechanical structures having dimensions typically on the order of microns or tens of microns, with microelectronics. In one example, in

the field of spatial light modulators for displays, micromirrors are digitally operated and have dimensions typically from 10 to 20 micrometers. I believe that the late transition metals used in the flexible portion of the MEMS device as set forth in the claims of my patent application have a lower affinity for forming particular compounds (e.g. compounds with nitrogen and/or oxygen) which can result in different mechanical and electrical properties of the flexible part of the device.

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. In the event any fees are required in connection with this paper, please charge our Deposit Account No. 501516.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gregory R. Muir", is written over a horizontal line.

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